A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B60G17/015 B60G17/052

Minimum documentation searched (classification system followed by classification symbols) IPC 7-B60G-B60T

According to International Patent Classification (IPC) or to both national classification and IPC

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

X US 6 116 586 A (JOB HEINZ ET AL) 12 September 2000 (2000-09-12) figure 3 column 1, paragraph 4 column 6, paragraph 2 X US 6 098 967 A (FOLCHERT UWE) 8 August 2000 (2000-08-08) figure 2 X US 6 332 623 B1 (BEHMENBURG CHRISTOF ET 1, AL) 25 December 2001 (2001-12-25) A figure 2 X Further documents are listed in the continuation of box C. X Patent family members are listed in annex. *Special categories of cited documents: A document defining the general state of the art which is not considered to be of particular relevance: E carber document but published on or after the international filing date 1 document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citied to establish the comment of particular relevance; the claimed in vicalian or other store comment of particular relevance; the claimed in vicalian or other store comment of particular relevance; the claimed in vicalian or other store comment of particular relevance; the claimed in vicalian or other store comment of particular relevance; the claimed in vicalian or other store comment of particular relevance; the claimed in vicalian or other store comment of particular re			ENTS CONSIDERED TO BE RELEVANT	C. DOCUME
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European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,			NL - 2280 HV Rijswijk	

INTER TIONAL SEARCH REPORT

Internation Application No PCT/EP 03/09544

·-··		101721	03/ 03544
Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6116586 A		DE 19745195 A1 EP 0908335 A1	22-04-1999 14-04-1999
US 6098967 A		DE 19724747 C1 DE 59802026 D1 EP 0884203 A1 ES 2166118 T3	25-06-1998 13-12-2001 16-12-1998 01-04-2002
US 6332623 B1		DE 19835491 A1 AT 207014 T AU 752016 B2 AU 4236499 A DE 59900319 D1 EP 0978397 A1 ES 2165717 T3 DP 2000052739 A 10 993771 A	17-02-2000 15-11-2001 05-09-2002 02-03-2000 22-11-2001 09-02-2000 16-03-2002 22-02-2000 07-02-2000
JP 2002087040 A	26-03-2002 N	IONE	
US 4799707 A	24-01-1989 N	ONE	

A. KLASSIFIZIERUNG DES ANMELDUNGSGEGENSTANDES IPK 7 B60G17/015 B60G17/052

Nach der Internationalen Patentklassifikation (IPK) oder nach der nationalen Klassifikation und der IPK

B. RECHERCHIERTE GEBIETE

Recherchierter Mindestprüfstott (Klassifikationssystem und Klassifikationssymbole) $\begin{array}{ccc} \text{Recherchierter Mindestprüfstott} & \text{Klassifikationssystem und Klassifikationssymbole} \\ \text{IPK} & 7 & \text{B60G} & \text{B60T} \\ \end{array}$

Recherchierte aber nicht zum Mindestprüfstoff gehörende Veröffentlichungen, soweil diese unter die recherchierten Gebiete fallen

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Kategorie ^e	Bezeichnung der Veröffentlichung, soweit erforderlich unter Angal	be der in Betracht kommenden Teile	Betr. Anspruch Nr.
X	US 6 116 586 A (JOB HEINZ ET AL 12. September 2000 (2000-09-12)) `	1-7, 11-15,
	Abbildung 3 Spalte 1, Absatz 4 Spalte 6, Absatz 2		20-22
X	US 6 098 967 A (FOLCHERT UWE) 8. August 2000 (2000-08-08)		1,2,4-9, 11-14, 16,20-22
	Abbildung 2		10,20-22
(US 6 332 623 B1 (BEHMENBURG CHRI AL) 25. Dezember 2001 (2001-12-29		1,2,4-7, 11-13,
	Abbildung 2		15,17, 20,22 10
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4.	Dezember 2003	16/01/2004	
me und P	ostanschrift der Internationalen Recherchenbehörde Europäisches Patentami, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo ni,	Bevollmächtigter Bediensteter	

Internation Aldenzeichen
PCT/EP 03/09544

lm Recherchenbericht angeführtes Patentdokument	Datum der Veröffentlichung	Mitglied(er) der Patentfamilie	Datum der Veröffentlichung
US 6116586 A	12-09-2000	DE 19745195 EP 0908335	
US 6098967 A	08-08-2000	DE 59802026 EP 0884203	C1 25-06-1998 D1 13-12-2001 A1 16-12-1998 T3 01-04-2002
US 6332623 B1	25-12-2001	EP 0978397 ES 2165717	T 15-11-2001 B2 05-09-2002 A 02-03-2000 D1 22-11-2001 A1 09-02-2000 T3 16-03-2002 A 22-02-2000
JP 2002087040 A	26-03-2002	KEINE	
US 4799707 A	24-01-1989	KEINE	